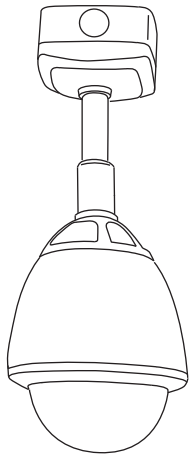
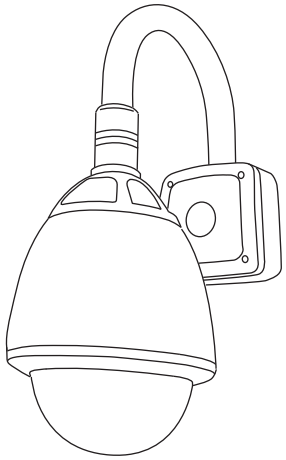
VHSD-770EXT High Speed Dome System

User Manual





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Before installing

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·Installation should be carried out only by qualified personnel and in accordance with any wiring regulations in force at the time.
·The speed dome is heavy and could cause injury if not correctly mounted in accordance with these instructions. Use only the fittings supplied with the speed dome and ensure that all lanyard safety cables are connected correctly during installation.
·Adequate protection against lightning strikes and power surges must be installed to prevent damage to the speed dome.
·Any safety warnings on the product and in these instructions must be adhered to.
·If cleaning is necessary, disconnect power to the speed dome first. Do not use abrasive cleaners, as these will cause damage to the cover and cause poor image quality. Use a damp cloth to gently clean the dome cover and dry off with a soft clean cloth.
·Do not use any brackets, mounts or other accessories not specifically designed for use with this speed dome.
Do not attempt to service or repair the speed dome as opening or removing covers may expose dangerous voltages or other hazards. Refer all servicing to qualified service personnel.

Key features

Presets
Up to 127 sets of positional and zoom level information can be stored as presets. These can be called manually by the operator, automatically by an alarm input, or grouped to form a sequence of actions to run automatically.
Each preset can also be programmed with the following:
Alarm action - relay outputs can be triggered when particular presets are called
Title - each preset can be titled with up to 10 characters so that zones can easily be identified

Pattern tours
Any dome movement can be recorded - and subsequently played back - as four separate pattern tours. These can be played back individually or grouped to form a sequence of tours.

Variable speed tracking between 2 presets
VST is a useful feature when, for example, the operator wishes to 'patrol' a perimeter fence. If one preset is defined at one end of the fence and a second preset is defined at the other, the VST function will smoothly and accurately move from one end to the other and then back again in a repeating sequence. Speed can be adjusted as necessary and up to 8 VST functions can be defined.

Group function
The group function is a powerful feature which allows the operator to define a sequence of speed dome actions to form an automatic patrol sequence. Actions can be a mix of preset positions, pattern tours and VST functions. Up to 8 groups can be defined and each group can have up to 20 actions which repeat indefinitely until interrupted by the operator or an alarm input. Specific parameters such as preset speed, dwell time and action loop can also be specified

Privacy zones
By defining a privacy zone, sensitive scenes such as windows can be masked off so they cannot be viewed by the operator. Up to 4 privacy zones can be defined. Privacy zone size adjusts automatically depending on the speed dome zoom level.

Alarm inputs and outputs
This speed dome has 8 alarm inputs and 4 alarm outputs. Any alarm input can be set to call a predefined preset, VST function, pattern or group. Any preset can be configured to activate any or all of the alarm outputs. For example, a PIR detector connected to alarm input 1 could call preset 7 to view that particular scene whilst activating an external lamp connected to relay 1 and an external siren connected to relay 3.

On Screen Display (OSD)
The operator can choose if any or all of the following information is displayed on screen during normal speed dome operation.

Preset status and title
Speed dome position coordinates and zoom level
Alarm I/O status
·Time and Date
Speed dome ID

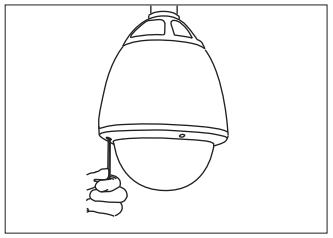
The speed dome also has a full on screen menu setup allowing quick and easy configuration of all the speed dome features.

Powerful park function
The speed dome can be configured to run a specified VST function, pattern tour, group or preset after a defined period of inactivity.

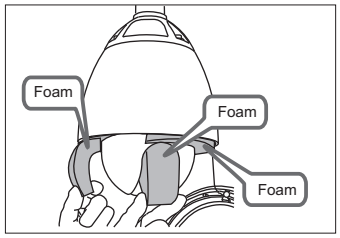
Configure, fix and wire

Before proceeding with installation, the speed dome foam packing pieces must be removed. Remove the outer dome cover with the tool supplied and carefully remove the foam packing pieces. When handling the dome cover, always wear the gloves supplied to avoid getting fingerprints on the outer dome cover.

1. Remove the foam packing pieces



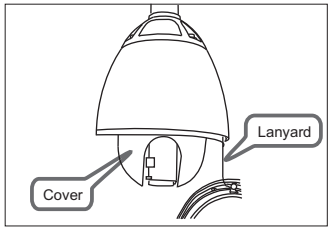
1. Wearing the gloves and using the supplied tool, remove the outer dome cover.



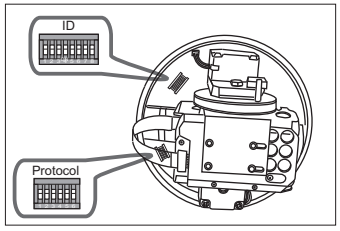
2. Remove the foam pieces from the camera module.

2. Change protocol, baud rate and ID if required

The factory default setting is Pelco D, 2400, ID 1. Skip to section 3 if these settings match your control equipment



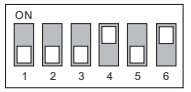
1. Carefully unclip the black inner dome



2. Locate the dip switches and set protocol and ID according to the table opposite.

Protocol & Baud rate DIP switch table

1	2	Protocol/Rate
OFF	OFF	Pelco D, 2400 bps
ON	OFF	Pelco D, 9600 bps
OFF	ON	Pelco P, 4800 bps
ON	ON	Pelco P, 9600 bps

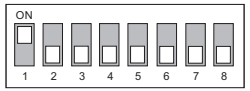


Factory default switch positions

Note: Dip switches 3 - 6 are reserved and must not be changed.

Speed dome ID DIP switch table

1	2	3	4	5	6	7	8	DIP
1	2	4	8	16	32	64	128	Val / ID
ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	1
OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	2
ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	3
OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	4
ON	OFF	ON	OFF	OFF	OFF	OFF	OFF	5
OFF	ON	ON	OFF	OFF	OFF	OFF	OFF	6
ON	ON	ON	OFF	OFF	OFF	OFF	OFF	7
OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	8
---	---	---	---	---	---	---	---	-
ON	ON	ON	ON	ON	ON	ON	ON	255



Factory default switch positions

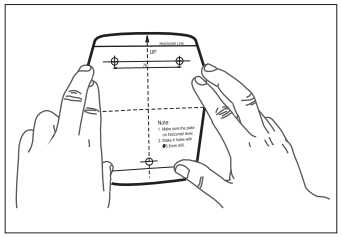
Speed dome ID is set using standard binary notation

Note: ID 0 should not be used. Where multiple speed domes are connected, a unique ID must be assigned to each one.

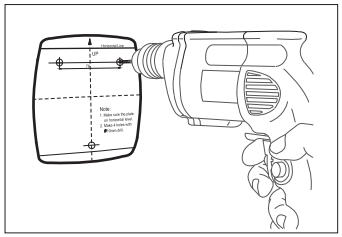
3. Reassemble the speed dome

Refit the black inner dome cover and outer dome cover. If the lanyard safety wire was removed, it must be refitted before the dome cover is fixed.

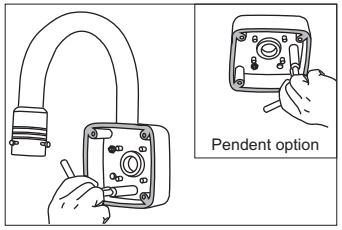
4. Fix the bracket



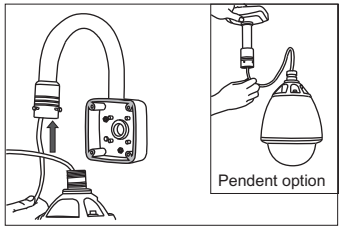
1. Fix the supplied mounting template, taking account of any pipework, cables, overhangs etc. that may obstruct the bracket once fitted.



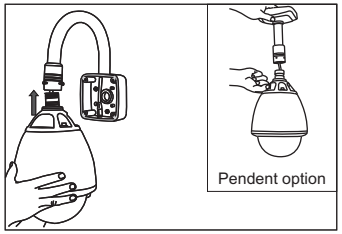
2. After making suitable checks for buried pipes and cables, drill fixing holes suitable for the bolts supplied with the speed dome.



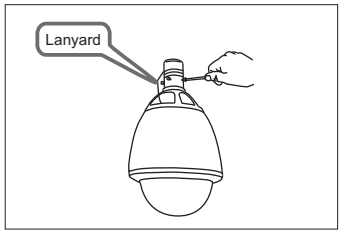
3. Remove the junction box cover. Using the supplied bolts and tool, firmly fix the bracket.



4. Feed the speed dome cable through the bracket.

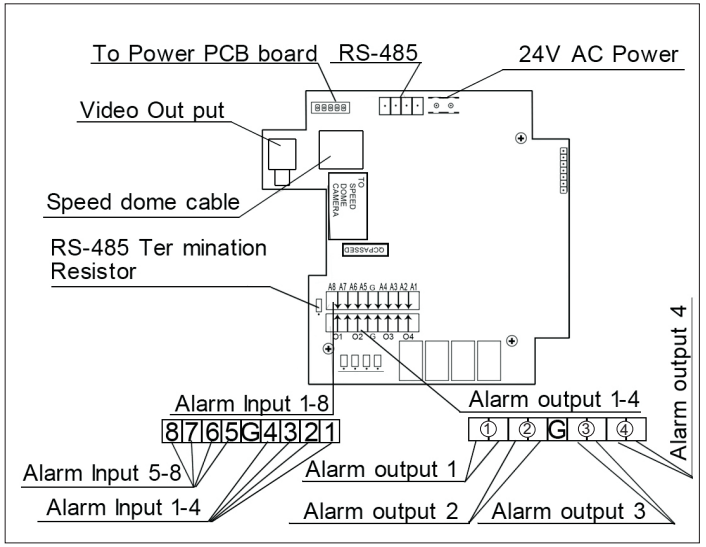


5. Bring the speed dome up to the bracket.



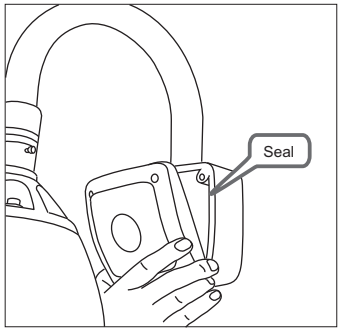
6. Tighten the three screws to fix the speed dome and ensure the lanyard safety chain is properly connected.

5. Wire up the junction box

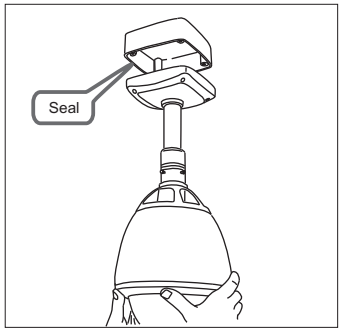


Video output - standard 1V P-P. Use good quality 75 Ohm cable terminated with a BNC connector.
RS-485 termination resistor - switch to 'ON' if the speed dome is the last device on the telemetry line.
24V AC Power - use only the PSU supplied with the speed dome or a PSU approved for use with the speed dome.
RS-485 - telemetry connection. Use unshielded CAT5 or Beldon 8723. Connect 'A' to 'A' or 'D+' of your control equipment and 'B' to 'B' or 'D-'. The terminals are duplicated for daisy chaining purposes.
Alarm outputs - switched voltage free outputs. Outputs 3 and 4 can be set either NO or NC by changing the jumpers.
Alarm inputs - standard NO inputs with common ground.
Speed dome cable - multi way connection plug to the speed dome.

6. Complete the install



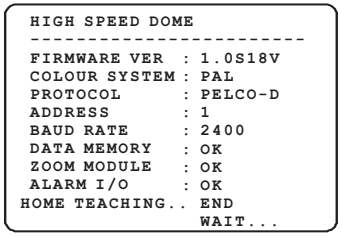
1a - wall bracket option. After making all the connections to the PCB, fit the junction box cover with the four screws.



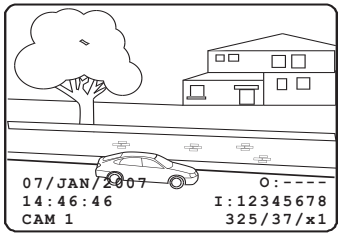
1b - pendent option. After making all the connections to the PCB, raise the dome assembly to the junction box, connect the dome cable to the PCB and fix with the four screws.

Note: when fixing the cover to the junction box, ensure that the seal is also fitted properly and that none of the cables are trapped

7. Verify basic operation



1. After carefully checking the installation, including all cable connections, apply power to the dome and check that the startup and self test screen is displayed.



2. After the self test is complete, the dome starts normal operation. Verify that there is basic PTZ control from your control equipment.

If there's a problem at this stage…

…work through the logical steps below to determine and rectify the problem

No picture - check the PCB to make sure the red power LED is lit. If not, check that the PSU is correctly connected and has power. If you have a test meter, verify that the output of the PSU is approximately 24V AC.

If the power LED is lit, check the BNC crimp connection is correctly made at both the PCB end and the DVR / monitor / matrix end. A portable test monitor connected directly to the video output of the speed dome is also a useful test - if a picture is displayed, double check the BNC connections and the signal cable used.

No PTZ control - check that the control equipment you are using is compatible with the speed dome and is configured to match the speed dome settings correctly.

If dip switches were changed on the speed dome, check the power on self test screen to ensure that protocol, ID and baud rate are as expected.

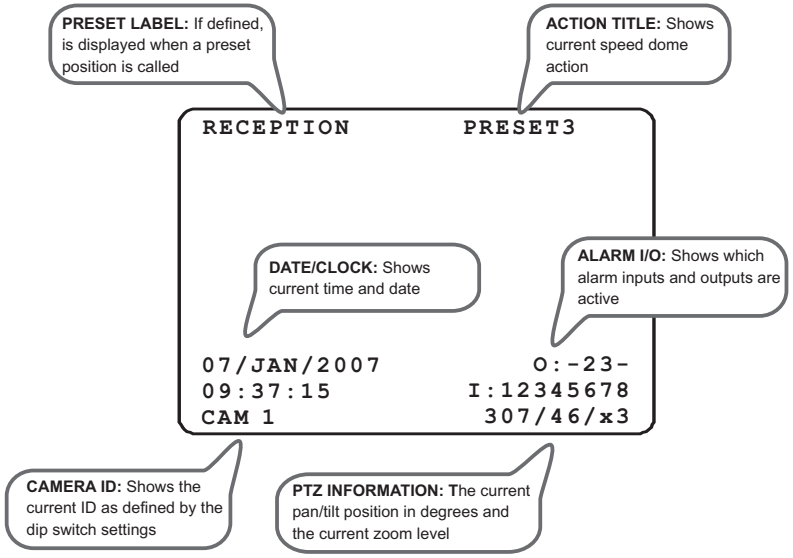
If the settings match, you should check the polarity of the connections, both on the control equipment and the speed dome. If you suspect there is a polarity issue, swap the A & B wires at the speed dome to see if this resolves the problem.

Check also that there are no other telemetry devices on the system with the same ID as the speed dome. If in doubt, connect the speed dome directly to the PTZ controller and isolate all other equipment.

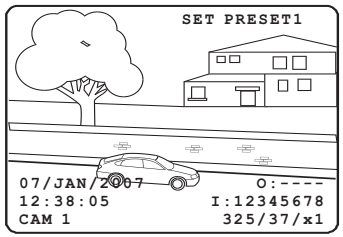
Basic speed dome operation

There are many different PTZ keyboards and DVR systems capable of controlling this speed dome, and it would be impossible to describe them all here. Therefore, examples given in the following pages are based on the more popular control equipment available. Whilst the principles of operation are the same, regardless of the control equipment used, reference may need to be made to the manual supplied with your particular control equipment.

Understanding the On Screen Display (OSD)



Programming, calling and deleting presets



To program a preset position, move the speed dome to the desired scene and zoom level and press:

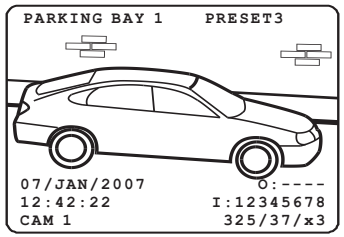
SET - XXX - ENTER

Where ***XXX*** is a preset number between 1 & 128 (but note that preset 95 is reserved and cannot be used). Confirmation is displayed on the OSD.

To delete a preset position, press:

CLEAR - XXX - ENTER

Where ***XXX*** is a preset number between 1 & 128 (but note that preset 95 is reserved and cannot be used). The preset position is cleared from memory.



To go to a preset position thats already been programmed, press:

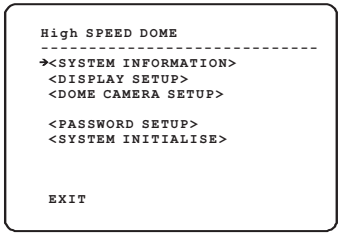
PRESET - XXX - ENTERXXX - Preset

Where ***XXX*** is a preset number between 1 & 128 (but note that preset 95 is reserved and cannot be used). The speed dome moves to the preset position. Confirmation and preset title (if defined) is displayed on the OSD.

To reprogramme a preset position, follow the steps for programming a preset - it is not necessary to delete the old preset position first

Programming the speed dome

The speed dome setup menu allows the operator to customise and program all aspects of speed dome operation. All menu settings are retained in non-volatile memory so if power is lost to the speed dome for any reason, all settings will be retained.



To access the speed dome setup menu, key:

PRESET - 95 - ENTER

To navigate the main menu, move the joystick up / down to choose a menu item or change settings within a menu item.

To enter a menu item or confirm a new setting, key: **NEAR**
To exit a menu item or cancel a new setting, key: **FAR**

Where a menu item is surrounded by brackets, it indicates that there is a sub menu.

Where a menu screen shows **EXIT**, selecting this option will exit the menu and the speed dome will return to normal operation. Where a menu screen shows **BACK**, selecting this option will return to the higher menu level.

The main menu has five options:

<SYSTEM INFORMATION> - Provides information such as firmware version, protocol and ID values as defined by the dip switch settings.

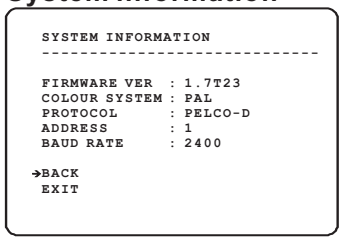
<DISPLAY SETUP> - Allows the operator to specify which On Screen Display information is shown during normal operation. Also allows privacy zones to be defined and time/date to be changed

<DOME CAMERA SETUP> - Allows all operating features of the speed dome to be programmed and managed. Also allows settings for the camera module to be changed

<PASSWORD SETUP> - Allows a password to be set to protect the speed dome setup

<SYSTEM INITIALISE> - Allows various speed dome settings to be reset to factory defaults

System information

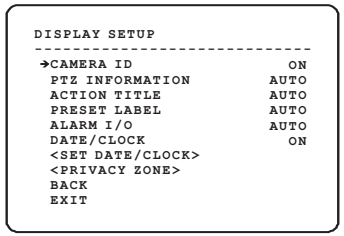


From the main menu, use the joystick to highlight **SYSTEM INFORMATION** and key: **NEAR**

To return to the main menu, highlight **BACK** and key: **NEAR**

To exit the setup menu completely, highlight **EXIT** and key: **NEAR**

Display setup



From the main menu, use the joystick to highlight **DISPLAY SETUP** and key: **NEAR**

CAMERA ID (ON / OFF) - shows camera ID according to the DIP switch settings, eg CAM 1.

PTZ INFORMATION (ON / OFF / AUTO) - shows the current pan / tilt position in degrees and the current zoom level.

ACTION TITLE (ON / OFF / AUTO) - shows current speed dome action, eg PRESET3.

PRESET LABEL (ON / OFF / AUTO) - shows preset title (if defined) when a preset is called.

ALARM I/O (ON/OFF) - shows real time status of the alarm inputs and outputs.

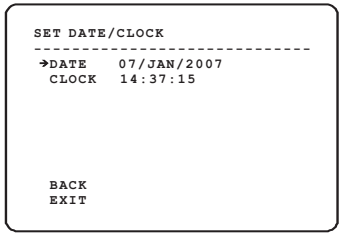
<SET DATE/CLOCK) - sub menu to change the date and time

<PRIVACY ZONE> - sub menu to setup the speed dome privacy zones

Highlight the item to modify and key: **NEAR**
Use the joystick to change the setting and key: **NEAR** to save or: **FAR** to cancel.

Note: If the auto option is chosen, the relevant information is displayed for a few seconds before disappearing.

Set date/clock

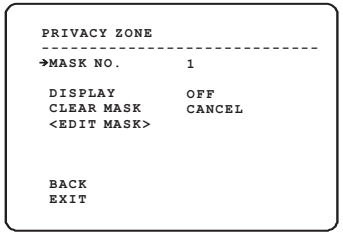


From the display setup menu, use the joystick to highlight **SET DATE/CLOCK** and key: **NEAR**

Highlight the item to modify and key: **NEAR**
Move the joystick up and down to change an individual value and left and right to move to the previous / next value

Key: **NEAR** to save or: **FAR** to cancel.

Privacy zone



From the display setup menu, use the joystick to highlight **PRIVACY ZONE** and key: **NEAR**

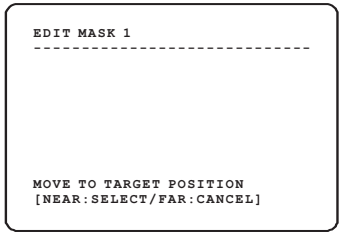
MASK NO. (1-4) - shows the privacy zone currently being modified.

DISPLAY - determines whether the privacy zone is displayed during normal operation.

<EDIT MASK> - allows the operator to define the privacy zone.

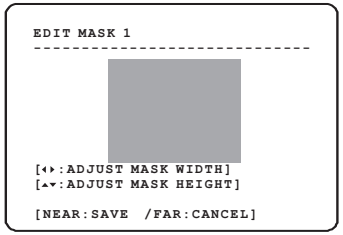
Highlight the item to modify and key: **NEAR**
Use the joystick to change the setting and key: **NEAR** to save or: **FAR** to cancel.

Edit mask



From the privacy zone menu, use the joystick to highlight **EDIT MASK** and key: **NEAR**

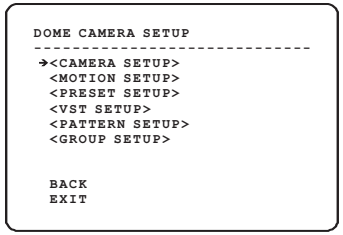
Use the joystick to move the speed dome to the approximate position and zoom level for the privacy zone and key: **NEAR** to select or **FAR** to cancel and return to the privacy zone menu.



Move the joystick left and right to finely adjust the width of the privacy zone and up and down to finely adjust the height.

To save the privacy zone, key: **NEAR** or key: **FAR** to cancel.

Dome camera setup



From the main menu, use the joystick to highlight **DOME CAMERA SETUP** and key: **NEAR**

<CAMERA SETUP> - setup of specific camera module features.

<MOTION SETUP> - setup of the pan / tilt / zoom operation of the speed dome, park action configuration, and configuration of the alarm inputs.

<PRESET SETUP> - full management and programming of individual presets.

<VST SETUP> - full management and programming of VST functions.

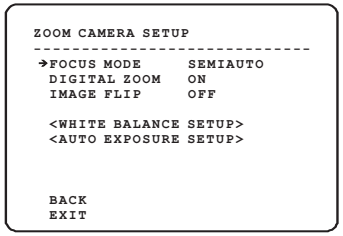
<PATTERN SETUP> - full management and programming of pattern tours.

<GROUP SETUP> - full management and programming of group functions.

Highlight the setup menu required and key: **NEAR**

Remember: A menu item surrounded by brackets shows it has a sub menu.

Camera setup



From the dome camera setup menu, use the joystick to highlight **CAMERA SETUP** and key: **NEAR**

FOCUS MODE
MANUAL - the operator must focus the camera manually using the NEAR and FAR keys
SEMIAUTO - the camera automatically focuses during normal PTZ movement but preset focus information is stored when a preset is programmed and recalled each time the preset is called
AUTO - the module auto focuses continually

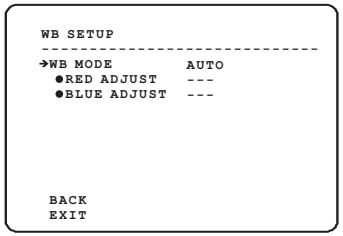
DIGITAL ZOOM (ON / OFF) - disables or enables the 8x digital zoom. When disabled, the maximum zoom level is 23x (optical).

IMAGE FLIP (ON / OFF)

<WHITE BALANCE SETUP> - sub menu to change the white balance settings

<AUTO EXPOSURE SETUP> - sub menu to change the auto exposure settings

White balance setup



From the zoom camera setup menu, use the joystick to highlight **WHITE BALANCE SETUP** and key: **NEAR**

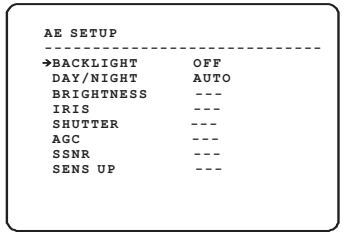
WB MODE (AUTO / MANUAL)
AUTO - the speed dome determines the optimum white balance settings for a given scene
MANUAL - the operator can adjust white balance settings manually

RED ADJUST - in manual mode, the red colour content can be adjusted

BLUE ADJUST - in manual mode, the blue colour content can be adjusted

Highlight the item to modify and key: **NEAR**
Use the joystick to change the setting and key: **NEAR** to save or: **FAR** to cancel.

Auto exposure setup



From the zoom camera setup menu, use the joystick to highlight **AUTO EXPOSURE SETUP** and key: **NEAR**

BACKLIGHT (ON/OFF)

DAY/NIGHT (AUTO/DAY/NIGHT) - the operator can choose to fix the camera in to DAY (colour) or NIGHT (B&W with IR cut filter mode). In AUTO mode, the camera switches between DAY and NIGHT depending on the surrounding light level

BRIGHTNESS - (0 ~100)

IRIS (Auto/Manual)

SHUTTER (ESC/Manual/Flickerless) -In ESC mode, the speed dome determines the optimum exposure setting

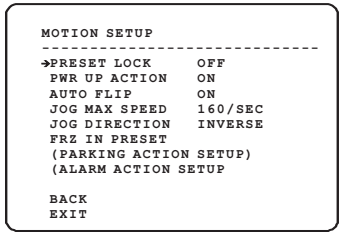
AGC (Off/Low/Middle/High)

SSNR (Off/Low/Middle/High)

SENS UP (Auto/Off)

Highlight the item to modify and key: **NEAR**
Use the joystick to change the setting and key: **NEAR** to save or: **FAR** to cancel.

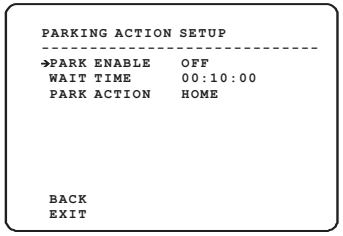
Motion setup



From the dome camera setup menu, use the joystick to highlight **MOTION SETUP** and key: **NEAR**
PRESET LOCK - when set to ON, preset programming directly from the keyboard is disabled to prevent tampering
PWR UP ACTION - when set to ON, the speed dome will resume its last operation when power is restored after a power failure
AUTO FLIP (ON / OFF) - when set to ON, the dome will flip 180 degrees when the tilt position reaches 90 degrees.
JOG MAX SPEED - determines the maximum speed in degrees / second the dome will move during manual operation
JOG DIRECTION (INVERSE / NORMAL) - when set to normal, the pan direction is opposite to the joystick movement.
<PARKING ACTION SETUP> - Configure actions that run automatically after a defined period of inactivity
FRZ IN PRESET - FREEZE IN PRESET. When a new preset is selected the speed dome will freeze the last picture until the new preset is reached.
<ALARM ACTION SETUP> - Configure the action of the alarm inputs.

Highlight the item to modify and key: **NEAR**
Use the joystick to change the setting and key: **NEAR** to save or: **FAR** to cancel.

Parking action setup



From the motion setup menu, use the joystick to highlight **PARKING ACTION SETUP** and key: **NEAR**

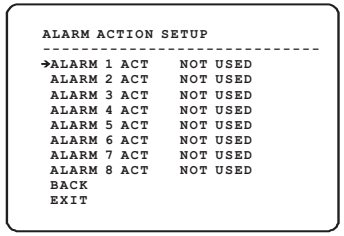
PARK ENABLE - when set to ON, the speed dome will run the specified park action after the wait time has elapsed

WAIT TIME - can be set between one minute and 4 hours. If no manual control occurs during this time, the park action will run

PARK ACTION - choose the action to run after the wait time has elapsed. This can be return to home position, go to a preset or run a VST, GROUP or PATTERN TOUR

Highlight the item to modify and key: **NEAR**
Use the joystick to change the setting and key: **NEAR** to save or: **FAR** to cancel.

Alarm action setup

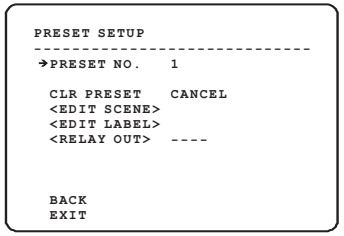


From the motion setup menu, use the joystick to highlight **ALARM ACTION SETUP** and key: **NEAR**

ALARM 1....8 ACT - for each alarm action, specifies the preset number, VST, pattern tour or group to call. Leave set to NOT USED to disable the alarm input.

Highlight the item to modify and key: **NEAR**
Use the joystick to change the setting and key: **NEAR** to save or: **FAR** to cancel.

Preset setup



From the dome camera setup menu, use the joystick to highlight **PRESET SETUP** and key: **NEAR**

PRESET NUMBER (1 - 128) - The preset number currently being modified. If the preset number is already defined, the speed dome will move to that preset position, otherwise UNDEFINED is displayed under the preset number

CLR PRESET - use this option to delete the current preset position

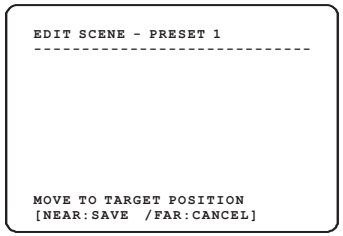
<EDIT SCENE> - use this option to program the preset position

<EDIT LABEL> - use to edit the preset label. ***This option is only available when the selected preset position is already programmed***

<RELAY OUT> - use to program the relay outputs required (if any) when the preset is called. ***This option is only available when the selected preset position is already programmed***

Highlight the item to modify and key: **NEAR**
Use the joystick to change the setting and key: **NEAR** to save or: **FAR** to cancel.

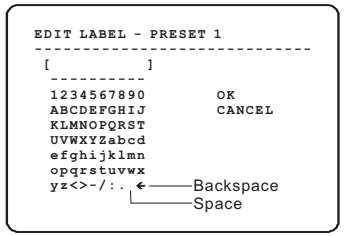
Edit scene



From the preset setup menu, use the joystick to highlight **EDIT SCENE** and key: **NEAR**

Using the joystick, move the speed dome to the desired position and zoom level and key: **NEAR** to save or: **FAR** to cancel.

Edit label



From the preset setup menu, use the joystick to highlight **EDIT LABEL** and key: **NEAR**

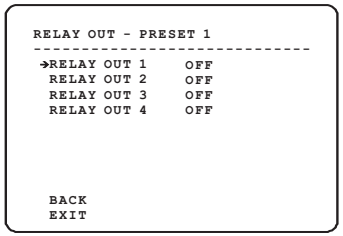
The solid white square shows the current cursor position.
The flashing white square shows the currently selected character.

Move the joystick up / down / left / right to choose the required character and key: **NEAR** to insert it in the preset label. The solid white square moves to the next cursor position. Repeat until the preset label is complete.

If a mistake is made, use the joystick to select the backspace (←) and key: **NEAR**. The cursor moves back one square.

Select **OK** to save the preset label or **CANCEL** to lose changes, and key: **NEAR** to exit

Relay out

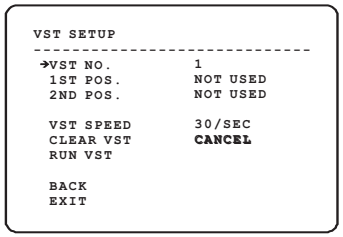


From the preset setup menu, use the joystick to highlight **RELAY OUT** and key: **NEAR**

RELAY OUT 1..4 (ON / OFF) - set which relays are triggered when the preset is called.

Highlight the item to modify and key: **NEAR**
Use the joystick to change the setting and key: **NEAR** to save or: **FAR** to cancel.

VST setup



From the dome camera setup menu, use the joystick to highlight VST **SETUP** and key: **NEAR**

VST NO. (1-8) - shows the VST number currently being modified.

1ST POS. - any defined preset between 1 & 128.

2ND POS. - any defined preset between 1 & 128.

VST SPEED - determines the speed of movement in degrees per second between each preset position.

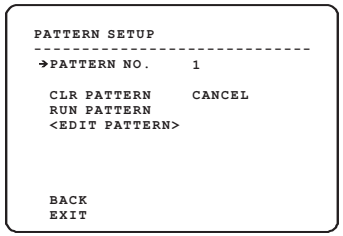
CLEAR VST - deletes the currently selected VST function.

RUN VST - runs the currently selected VST function for testing purposes

Highlight the item to modify and key: **NEAR**
Use the joystick to change the setting and key: **NEAR** to save or: **FAR** to cancel.

Note: A VST always moves anti-clockwise to the 1st position and then clockwise to the 2nd position.

Pattern setup



From the dome camera setup menu, use the joystick to highlight **PATTERN SETUP** and key: **NEAR**

PATTERN NO. (1 - 4) - The pattern number currently being modified.

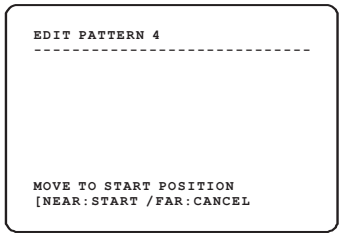
CLR PATTERN - the currently selected pattern can be deleted

RUN PATTERN - runs the currently selected pattern for testing purposes

<EDIT PATTERN> - allows the operator to program a patten tour

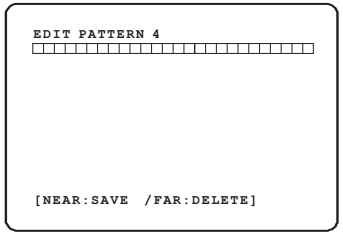
Highlight the item to modify and key: **NEAR**
Use the joystick to change the setting and key: **NEAR** to save or: **FAR** to cancel.

Edit pattern



From the pattern setup menu, use the joystick to highlight **EDIT PATTERN** and key: **NEAR**

Position the speed dome to the desired starting point and key: **NEAR**

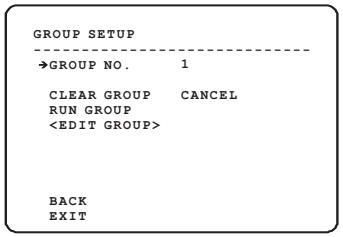


Move the dome to the various positions and zoom levels required for the pattern. The white squares at the top of the display show remaining storage and disappear as the pattern is recorded.

To save the pattern, key: **NEAR**
To abandon pattern programming, key: **FAR**

Note: Pattern tour memory is only used when movements are recorded. Pauses between movements, regardless of time, do not use pattern tour memory

Group setup



From the dome camera setup menu, use the joystick to highlight **GROUP SETUP** and key: **NEAR**

GROUP NO. (1-8) - shows the group number currently being modified.

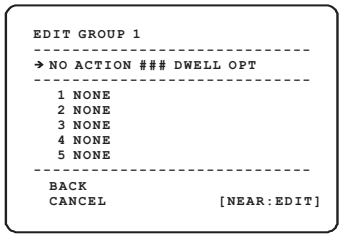
CLEAR GROUP - the currently selected group can be deleted

RUN GROUP - runs the currently selected group for testing purposes

<EDIT GROUP> - allows the operator to program the group functions

Highlight the item to modify and key: **NEAR** Use the joystick to change the setting and key: **NEAR** to save or: **FAR** to cancel.

Edit group



From the group setup menu, use the joystick to highlight **EDIT GROUP** and key: **NEAR**

To edit the group, key: **NEAR** again

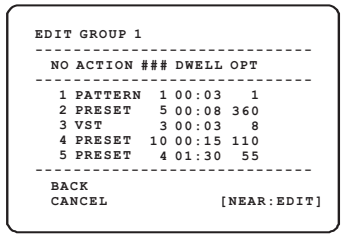
Header explanation:
NO - the item number (between 1 & 20)
ACTION - the specific action for this item
- the action number (eg if ACTION is set to PRESET, this value can be between 1 & 128
DWELL - the amount of time before the next action in the list is called
OPT - for PRESET actions, this value is the speed at which the dome moves to the preset. For VST and PATTERN, this value is the number of times the action is repeated before the next action is called

Move the joystick up and down to choose the group item to modify and key: **NEAR.** The ACTION is highlighted in white

Move the joystick up and down to change the action type between NONE, PRESET, VST and PATTERN.

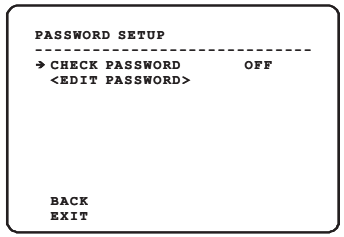
Move the joystick left and right to select and edit values for ###, DWELL & OPT.

Edit group



Key **NEAR** to save this item and continue adding more items as necessary, or key **FAR** to exit.

Password setup

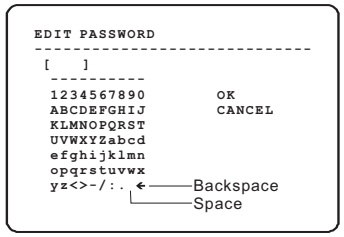


From the main menu, use the joystick to highlight **PASSWORD SETUP** and key: **NEAR**

CHECK PASSWORD (ON/OFF) - when set to ON, the correct password must be entered to access the speed dome setup menus

<EDIT PASSWORD> - allows the current password to be changed

Edit password



From the password setup menu, use the joystick to highlight **EDIT PASSWORD** and key: **NEAR**

The solid white square shows the current cursor position.
This flashing white square shows the currently selected character.

Move the joystick up / down / left / right to choose the required character and key: **NEAR** to insert it in the password. The solid white square moves to the next cursor position. Repeat until password entry is complete.

If a mistake is made, use the joystick to select the backspace (←) and key: **NEAR**. The cursor moves back one square.

Select **OK** to save the password or **CANCEL** to lose changes and key: **NEAR** to exit

Remember: When CHECK PASSWORD is set to ON, each time the operator attempts to enter the speed dome setup menu, the above screen will be displayed. The correct password must be entered to continue with menu setup

System initialise

```
SYSTEM INITIALISE
-----------------------------
→CLEAR ALL DATA     NO
  ●CLR DISPLAY SET  NO
  ●CLR CAMERA SET   NO
  ●CLR MOTION SET   NO
  ●CLR EDIT DATA    NO
 REBOOT CAMERA      NO
 REBOOT SYSTEM      NO

 BACK
 EXIT
```

From the main menu, use the joystick to highlight **SYSTEM INITIALISE** and key: **NEAR**

CLEAR ALL DATA - selecting this option will perform a full factory reset on the speed dome. All presets, VST functions, patterns, groups and privacy zones will be erased

CLR DISPLAY SET - this option will reset the on screen display settings to factory default and erase all privacy zones

CLR CAMERA SET - this option will reset the camera module settings to factory default

CLR MOTION SET - this option will reset the motion menu settings to factory default

CLR EDIT DATA - this option will erase all presets, VST functions, patterns and groups

Highlight the item to modify and key: **NEAR**
Use the joystick to change the setting to ON and key: **NEAR** to run or: **FAR** to cancel.

Using the speed dome features

Once the pattern tours, VST functions and groups have been programmed in the speed dome setup menu, they can all be accessed directly from the PTZ control equipment by using the following sequences.

1. To start a pattern tour press:

PRESET - 13X - ENTER

Where **X** is a pattern tour number between 1 & 4

The selected pattern tour will run indefinitely until a manual movement is made by the operator or an alarm input is received.

2. To start a VST function, press:

PRESET - 14X - ENTER

Where **X** is a VST function number between 1 & 8

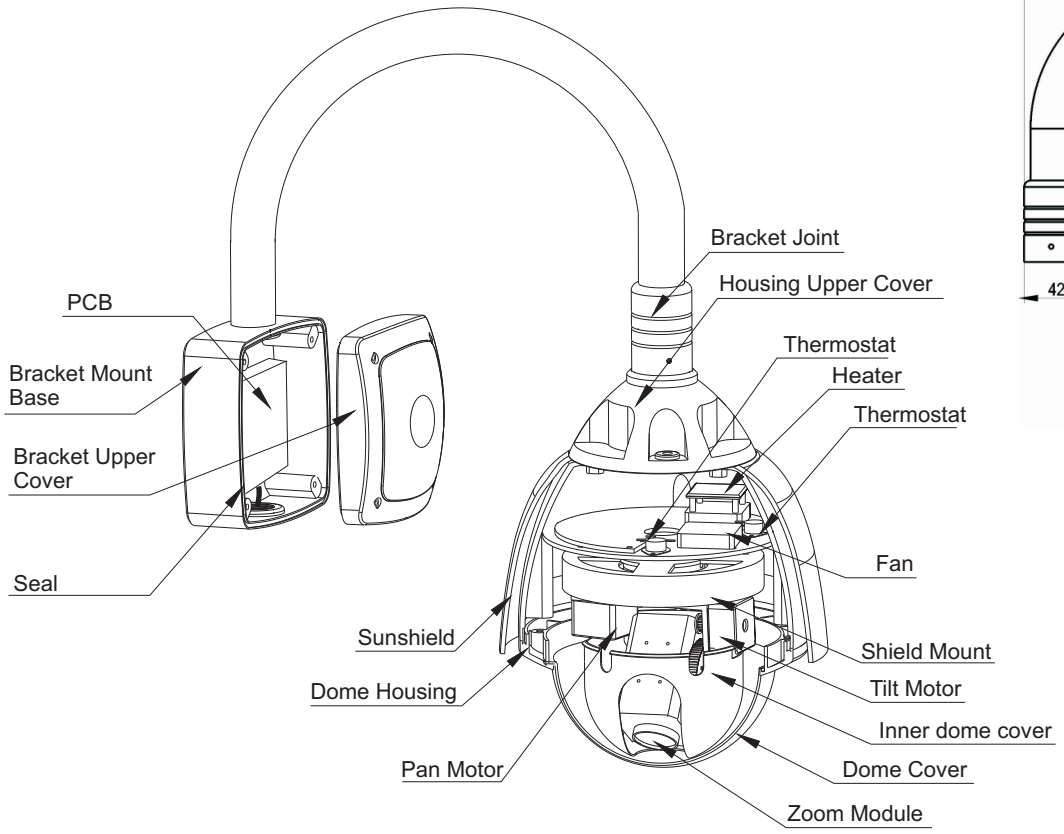
The selected VST function will run indefinitely until a manual movement is made by the operator or an alarm input is received.

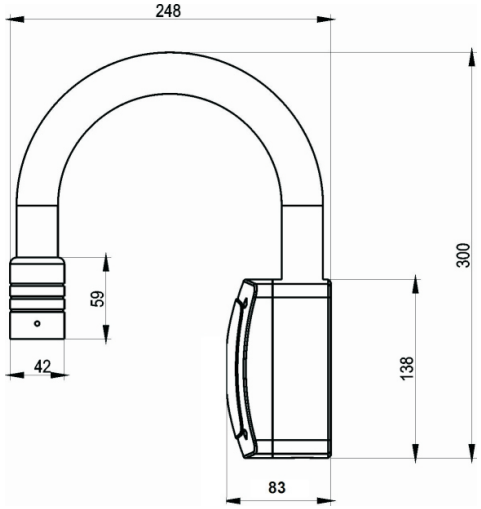
3. To start a group, press:
PRESET - 15X - ENTER

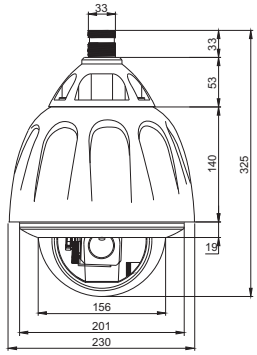
Where **X** is a group number between 1 & 8

The selected group will run indefinitely until a manual movement is made by the operator or an alarm input is received.

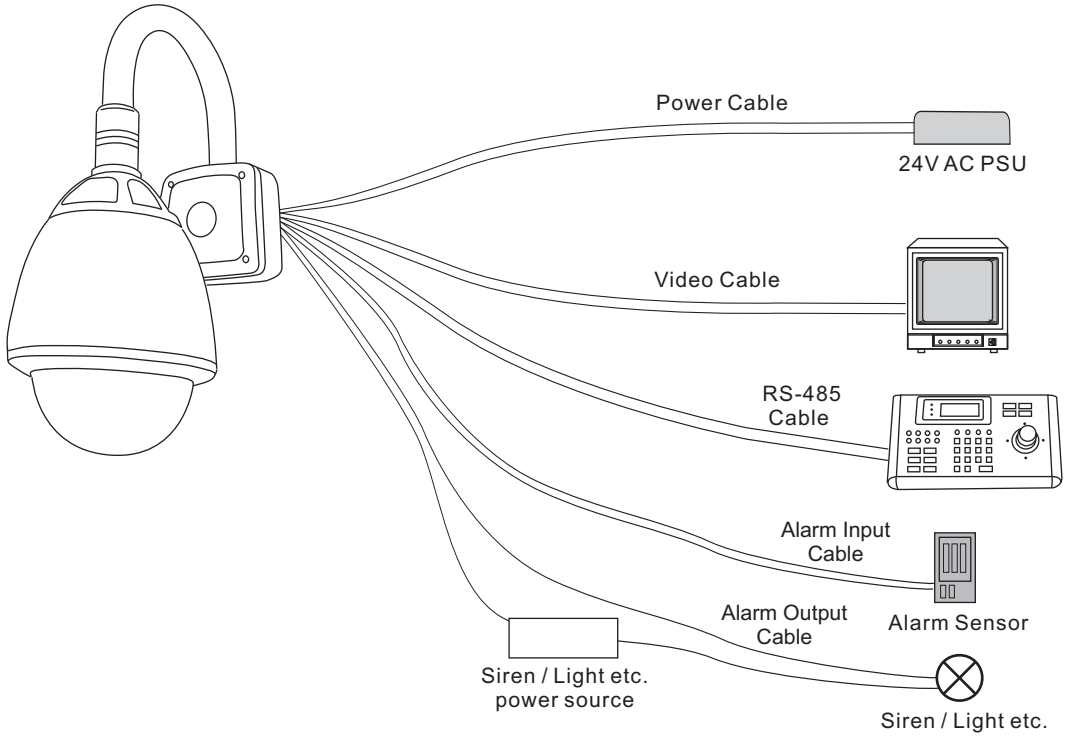
Parts and dimensions







Wiring schematic



Specifications

Camera	CCD	¼" Samsung Techwin Day / Night
	Resolution	540TVL
	Minimum Illumination	0.1 Lux
	Optical Zoom	23x f=3.84 ~ 88.4mm, F=1.6~3.2
	Digital Zoom	2X, 4X & 8X
	S/N Ratio	50db
	Focus	Auto / Manual
	White Balance	ATW/ Manual
	Back Light compensation	Low/ Middle /High / Off
Pan / Tilt	General	Pan: 360 degrees continuous rotation
		Tilt: 90 degrees with auto flip function
	Speeds	Manual / pattern tour: 1 - 255 degrees / second
		Preset to preset: 360 degrees / second
		VST: 1 - 255 degrees / second adjustable in 1 degree steps
	Preset positions	Up to 128, 10 character title per preset
	Pattern tours	Up to 4
	VSTfunction	Up to 8, speed adjustable
	Groups	Up to 8, each with up to 20 actions (preset, pattern tour or VST)
	Privacy zones	Up to 4, user definable
	Park function	Park to specified preset, pattern or VST after a defined period of inactivity (1 min ~ 4 hours)
Communication	Data type	RS-485
	Protocols	Pelco-D or Pelco-P
	Baud rates	2400, 4800, 9600
	Camera ID	1-255
	Alarm I/O	8 inputs, 4 outputs
	On Screen Display	OSD menu, camera position, dome ID, alarm status, preset / VST/ pattern tour status
Mechanical	Fan / Heater	Built in
	Sunshield	Fitted
	Operating temperature range	-35 deg C to +50 deg C
	Humidity	<95%
	Power supply	24V AC, 20 watts maximum (heater on)
	Dimensions (with standard wall Bracket and sun shield fitted)	Overall height: 530mm Overall width: 230mm Overall depth: 342mm

Installer notes

Make a note of any specific installation details here which would be useful for future reference